Group 2: Grace Cote, Hima Gharat, Josh Heisler, Salita Santiago, Marcellis Valentin

UPENN-PHI-DATA-PT-09-2020-U-C

Project 1 Proposal

***Setting The Data World Ablaze: The Data Stories Behind Wildfires***

According to FEMA, a wildfire is an unplanned fire that burns naturally (<https://www.ready.gov/wildfires>). With the recent increase of wildfires, large amounts of data are rising from the ashes. In 2020 alone, most of the continent of Australia and the west coast of the United States has been affected by mass wildfires.

The goal of analysis is to determine if wildfires are indeed increasing as much as we think and why or why not this may be the case. Diving into seasonality and cyclical trends as well as duration of when the fire ignited to when it was extinguished, data surrounding these frequencies and severities could give insight.

Once the initial question is answered, looking into the other trends that could be associated with the answer. Looking into the location of where the fires are more likely to occur and their spread, meaning timing and distance, could help determine the trend of increasing, decreasing or stagnant growth. Specifically, geographic region, climate, population density, and forest density could all be contributing factors. Data evaluating root causes of these fires, including human and natural causes, could find trends with the fire severity or frequency. While it is important to know if these wildfires are increasing in frequency and/or severity, it is equally important to determine how much damage they are actually causing. This includes financial damages and wildlife damage.

Using data analysis, better education and preventative measures can be implemented. Educating the decision makers about forest fire trends might prevent future occurrences. Any trends found from forest fires could have the benefit of confirming or denying media coverage on the topic. While there has been more coverage of wildfires in the recent months, the content may be rather misconstrued or outright false.

DATA SOURCE - National Interagency Fire Center

<https://www.nifc.gov/fireInfo/fireInfo_statistics.html>

* Wildland Fire uses Fire by Agency (1998-2008)
* Total Wildland Fires and Acres (1926-2019)
* Historical Year-End Fire Statistics by State (2002-2019)
* Wildfires larger than 100,000+ acres (1997-2019)
* Suppression Costs (1985-2019)

The National Interagency Fire Center (NFIC) is a government training organization that supports emergency response training. NFIC organizes and allocates resources to different federal, state, and local government agencies, including the National Park Service and the Departments of Agriculture and Interior. The data being used for analysis includes statistics on the number of fires as well as the burned acreage over time, by state, and the costs associated with the suppression of those fires.